

NONVOLATILE SEMICONDUCTOR MEMORY DEVICE AND METHODS FOR  
OPERATING AND PRODUCING THE SAME

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ABSTRACT OF THE DISCLOSURE

10 A nonvolatile semiconductor memory device with high  
reliability (free from troubles in storing data), a high  
charge injection efficiency, and enabling parallel  
operation in a VG cell array, includes channel forming  
regions, a charge storing film which consists of stacked  
dielectric films and is capable of storing a charge, two  
storage portions forming parts of the charge storing film  
and overlapping the channel forming regions, a single  
15 layer dielectric film between the storage portions and in  
contact with the channel forming region, a control gate  
electrode on the single layer dielectric film, and a  
memory gate electrode on the storage portions.